



DEPARTMENT OF THE NAVY
NAVY ENVIRONMENTAL HEALTH CENTER
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15 MAY 1996

From: Commanding Officer, Navy Environmental Health Center
To: Commander, Atlantic Division, Naval Facilities Engineering
Command, Attn: D. M. Forsythe, 1510 Gilbert Street,
Norfolk, VA 23511-2699

Subj: MEDICAL REVIEW OF INSTALLATION RESTORATION PROGRAM
DOCUMENTS FOR NORFOLK NAVAL BASE, NORFOLK, VA

Ref: (a) LANTNAVFACENGCOM ltr 5090 Ser/1822:DMF:cag of 17 Apr 96

Encl: (1) Health and Safety Plan Review
(2) Medical/Health Comments Survey

1. Per reference (a), we have completed a medical review of the "Draft Health and Safety Plan NM Slag Pile Remedial Investigation/Feasibility Study for Norfolk Naval Base, Norfolk, Virginia." Our comments are provided in enclosure (1).

2. Please complete and return enclosure (2). Your comments are needed to continually improve our services to you.

3. We are available to discuss the enclosed information by telephone with you and, if necessary, with you and your contractor. If you require additional assistance, please call Mr. Donald Coons at (804) 363-5547 or Ms. Mary Ann Simmons at (804) 363-5556. The DSN prefix is 864.

W. E. Luttrell
W. E. LUTTRELL
By direction

HEALTH AND SAFETY PLAN REVIEW

- Ref: (a) 29 CFR 1910.120 (Hazardous Waste Operations and Emergency Response)
(b) 29 CFR 1926.65 (Hazardous Waste Operations and Emergency Response)
(c) Navy/Marine Corps Installation Restoration Manual (February 1992)

General Comments:

1. The "Draft Health and Safety Plan NM Slag Pile Remedial Investigation/Feasibility Study, Contract N62470-95-D-6007, Contract Task Order No. 0008," was prepared for LANTNAVFACENGCOM, by CH2M Hill and forwarded to the Navy Environmental Health Center on 19 April 1996. The document is dated 12 April 1996.
2. The method for the review is to compare the health and safety plan (HASP) to federal requirements under OSHA regulations (29 CFR 1910.120 and 29 CFR 1926.65) and to Department of the Navy requirements under the "Navy/Marine Corps Installation Restoration Manual" (see references (a), (b), and (c) above). We noted deviations and/or differences in the plan from these two primary references. A list of acronyms used in our comments is included as Attachment (1).
3. The points of contact for review of the HASP are Mr. Donald J. Coons, Physical Science Technician, or Ms. Mary Ann Simmons, Industrial Hygienist, who may be contacted at (804) 363-5547 or 363-5556. The DSN prefix is 864.

Administrative Comment:

1. Numerous references are made throughout this health and safety plan to the CH2M Hill Corporate Health and Safety Program. We do not have a copy of this document and have not been requested to review it. Therefore, where information is not provided in the health and safety plan we were unable to evaluate its effectiveness.

Specific Comments:

1. Unnumbered Page, Figure 1-1, "Site Location Map":

Comment: Much site information in the HASP is generic to the Norfolk Naval Base. Figure 1-1, "Site Location Map," for example, is a representation of the entire Naval Base, (Naval Station and Naval Air Station). The Work Plan states that the NM Slag area is part of the Naval Air Station.

Recommendation: The final HASP should provide site-specific information, vice generic Naval Base information.

Enclosure (1)

2. Page 4, Section 2.2, "Description of Tasks":

Comment: The second sentence states, "A health and safety risk analysis has been performed for each task and is incorporated in this plan through task-specific hazard controls and requirements for monitoring and protection." The task hazard analyses were not included in this document.

Recommendation: Include a specific hazard analysis for each site task. We recommend using the three column hazard analyses format as noted in Figure 1-1, page 5, of the U. S. Army Corps of Engineers, *Safety and Health Requirements Manual*, EM 358-1-1, October 1992. This facilitates identification of each task and helps to ensure clarity and completeness of each hazard analysis. We have enclosed a copy of this form as Attachment (2) for your information. Include only site-specific information.

3. Page 5, Section 3.1.3, "Heat Stress Monitoring":

Comment: Information in the first paragraph is noted to be incomplete and/or misleading. For example, the last sentence of this paragraph states, "These procedures should be considered when ambient air temperature exceeds 70 degrees F, the relative humidity is high (>50%), or when the workers exhibit symptoms of heat stress." Information regarding the impact of semi-permeable or impermeable clothing on workers is not provided. The only method of physiological monitoring cited was monitoring of radial pulse rates.

Recommendation: We recommend that physiological monitoring commence at temperatures of 70 degrees F, or above, and for workers who are wearing semi-impermeable or impermeable clothing. Additional methods of monitoring, such as taking oral temperature, or weighing individuals before and after their shift could also be included. The ACGIH's *Threshold Unit Values for Heat Stress* provides guidance for monitoring workers wearing permeable clothing.

4. Page 14, Section 3.8, "Contaminants of Concern":

Comment: The unit for the concentrations of the contaminants of concern (COCs) is "ppm," a unit of measure normally used for results of volatile or semi-volatile compounds, not metals. It is unclear how this information relates to the stated COCs, since they are all metals with corresponding PELs reported in units of "mg/m³."

Recommendation: Use similar units for measured concentrations and PELs.

5. Page 15, Section 4.1, "CH2M Hill Employee Medical Surveillance and Training, first paragraph":

Comments:

a. The fifth sentence states, "At least one FA-CPR designated employee must be present during all tasks performed in the exclusion or decontamination zones that involve the potential for exposure to health and safety hazards."

b. The sixth sentence states, "The employees listed below are currently active in a medical surveillance program that meets state and federal regulatory requirements for hazardous waste operations." Information is not provided stating that the medical surveillance program is performed by or directly supervised by, a licensed physician who is board certified in the practice of occupational medicine.

Recommendations:

a. We recommend that at least two personnel, certified in adult first aid/CPR and trained in the bloodborne pathogens standard, be on-site whenever work is being performed.

b. Indicate that the medical surveillance program is performed by, or under the supervision of, an occupational health physician.

6. Page 19, Section 6, "Air Monitoring Specifications":

Comment: This section provides information regarding the frequency of monitoring for volatile and semi-volatile chemicals only. The stated contaminants of concern for this site are all metals.

Recommendation: Revise the section to include air monitoring methods that will measure metals. We recommend that air monitoring equipment be calibrated before and after each period of use in accordance with standard industrial hygiene practice and manufacturer's recommendations.

7. Page 23, Section 10.1, "Site-Control Procedures":

Comment: A requirement for all personnel entering the site to log-in and log-out is not included.

Recommendation: Include this requirement in the final HASP.

8. Pages 25 through 27, Section 11, "Emergency Response Plan":

Comments:

- a. A requirement to periodically exercise and critique the emergency response plan is not included.
- b. An eyewash is cited as part of the emergency equipment for this site. The emergency eyewash unit must meet the American National Standards Institute (ANSI) criteria and be capable of delivering 1.5 liters (0.4 gallons) of potable water to the eyes per minute for fifteen minutes.
- c. The seventh bullet in Section 11.3, "Emergency Medical Treatment," implies that decontamination efforts may be eliminated at times. Decontamination may be postponed, but not eliminated.

Recommendations:

- a. Indicate that the emergency response plan will be periodically exercised and critiqued in the final HASP.
- b. Include information stating that the emergency eyewash equipment meets the criteria of ANSI Standard Z358.1-1990, or later.
- c. Revise this bullet in the final document.

9. Page 28, Section 12.1, "Emergency Response Telephone Numbers":

Comment: No telephone number is provided for the NOSC/NOSCDR, the LEPC, the regional poison control center, or the nearest medical facility. Additionally, no map showing the route(s) to the medical facility(s) is provided.

Recommendation: Provide all appropriate emergency telephone numbers in the final HASP and verify them prior to starting site work.

ACRONYMS

ACGIH:	American Conference of Governmental Industrial Hygienists
ANSI:	American National Standards Institute
ATSDR:	Agency for Toxic Substances and Disease Registry
BBP:	Bloodborne Pathogen Program
CPR:	Cardiopulmonary Resuscitation
CRZ:	Contamination Reduction Zone
EIC:	Engineer-in-Charge
EMS:	Emergency Medical Service
EPA:	Environmental Protection Agency
EZ:	Exclusion Zone
HASP:	Health and Safety Plan
HBV:	Hepatitis B Virus
HIV:	Human Immunodeficiency Virus
IDLH:	Immediately Dangerous to Life and Health
LEL	Lower Explosive Limit
LEPC:	Local Emergency Planning Committee
MSDS:	Material Safety Data Sheet
NIOSH:	National Institute for Occupational Safety and Health
NOSC:	Navy On-Scene Coordinator
NOSCDR:	Navy On-Scene Commander
OSHA:	Occupational Safety and Health Administration
OV:	Organic Vapor
PCB:	Polychlorinated Biphenyl
PEL:	Permissible Exposure Limit
PID:	Photoionization Device
PPE:	Personal Protective Equipment
PPM:	Parts Per Million
SCBA:	Self Contained Breathing Apparatus
SOP:	Standard Operating Procedure
STEL:	Short Term Exposure Limit
TLV:	Threshold Limit Value

HAZARD ANALYSIS

ACTIVITY _____ ANALYZED BY/DATE _____ REVIEWED BY/DATE _____

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS	
Identify the principal steps involved and the sequence of work activities	Analyze each principal step for its potential hazards	Develop specific controls for each potential hazard	
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS	
List equipment/machinery to be used in conducting the work activities	List inspection requirements for the equipment/machinery listed	Determine requirements for worker training, including hazard communication.	

FROM: _____
 (YOUR NAME/COMMAND)
 TO: NAVENVIRHLTHCEN, ENVIRONMENTAL PROGRAMS
 FAX: COM: (804) 444-7261/DSN: 564-7261

MEDICAL/HEALTH COMMENTS - YOUR VIEW

Please help us improve our review process by indicating the extent to which you agree or disagree with the comments we provided your activity.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. "Value added" to IR/BRAC process?	1	2	3	4	5
2. Received in a timely manner?	1	2	3	4	5
3. High level of technical expertise?	1	2	3	4	5
4. Very useful to the RPM?	1	2	3	4	5
5. Contractor incorporated comments?	1	2	3	4	5
6. Easily readable/useful format?	1	2	3	4	5
7. Overall review was of high quality?	1	2	3	4	5
8. NAVENVIRHLTHCEN was easily accessible?	1	2	3	4	5
9. NAVENVIRHLTHCEN input during scoping or workplan development would be "value added"?	1	2	3	4	5
10. Added involvement in IR/BRAC document needed?	1	2	3	4	5

Please return by fax using the box provided at the top of this page. If you have any other comments, please list them below or telephone Ms. Mary Ann Simmons, Industrial Hygienist at (804) 363-5556, DSN 864, at any time to discuss your viewpoint. As our customer, your comments and suggestions of how we can improve our services to you are important!